

AMENDMENTS TO THE CLAIMS

1. – 14. (Canceled)

15. (New) A device for positioning a guiding tube (1) for a nephroscope, comprising:
an aspiration needle (2) having a first distal end and a second distal end; and
an inflatable enlargement device (4, 36) slidably positioned around the aspiration needle between the first and second distal ends such that the aspiration needle serves as a guide means for the inflatable enlargement device (4, 36), the inflatable enlargement device serving as the guide tube for the nephroscope at the time of its positioning on a patient; the inflatable enlargement device comprising:

a sliding tube (13, 39) positioned around the aspiration needle such that it slides along the aspiration needle and having a first sliding tube end (18) comprising at least two cutting blades (19, 46) making up a trocar and a second sliding tube end (33) comprising a handling sleeve (34, 53);

a support tube (15, 40) shorter in length than the sliding tube, positioned around the sliding tube and attached at its ends to the sliding tube, a first support tube end positioned adjacent to the cutting blades, and

a cuff (25, 41) surrounding the support tube (15, 40) and secured to the support tube at a first cuff end and a second cuff end, the first cuff end positioned immediately adjacent the first support tube end;

the support tube having an inner diameter that is larger than an outer diameter of the sliding tube to form an inflation fluid circulation space where a pressurized inflation fluid can flow between the sliding tube and the support tube,

the inflation fluid circulation space communicating with an inside area of the cuff through a first orifice (29, 42) opened in the support tube inside the cuff (25, 41) and with a filling tube (31, 57) through a second orifice opened in the support tube outside the cuff, such that an interior area of the cuff is in fluid communication with a supply of pressurized inflation fluid connected to the filling tube.

16. (New) A device according to claim 15, further comprising a closing mandrin (3) removably fitted within an interior of the needle and extending from the first distal end to the second distal end, the second distal end fitted with a needle sleeve (7) surrounding an exterior surface of the second distal end and having a diameter appreciably inferior to a diameter of the guiding tube (1), the closing mandrin having means for securing the closing mandrin to the needle sleeve (7).

17. (New) A device according to claim 15, wherein the supply of pressurized inflation fluid comprises an inflation fluid supply device (65, 68) containing the inflation fluid and connection means for connecting the inflation fluid supply device to the filling tube such that the inflation fluid is permitted to flow from the supply device into the cuff, but prevented from returning to the inflation fluid supply device.

18. (New) A device according to claim 15, wherein the support tube (15, 40) is connected by at least one of its ends (16, 17, 44) to the sliding tube (13, 39) in a sealed manner.

19. (New) A device according to claim 18, wherein a centring plug (43) is positioned between the sliding tube (13) and the support (15) to form the sealed connection between the support tube and the sliding tube

20. (New) A device according to claim 19, wherein the sealed connection further comprises a weld by capillarity between the sliding tube, the support tube and the centring plug.

21. (New) A device according to claim 19, wherein the sealed connection further comprises a sealing cylinder (64) made of plastic material.

22. (New) A device according to claim 17, wherein the connection means comprises a closing device (67) comprised of a ball-type device whose ball is pressed against a tapered seat by a spring, and which allows the inflation fluid of supply device (65) to flow towards the cuff

(25), but which prevents said inflation fluid from flowing back.

23. (New) A device according to claim 22, wherein the connection means further comprises a second connection interface (66) comprised of a male cone which engages into a female cone of a first connection interface device (32).

24. (New) A device according to claim 22, wherein the connection means further comprises a first connection interface device comprised of a rubber plug (60) cooperating with a second connection interface device comprised of a needle (61).

25. (New) A device according to claim 22, wherein the supply device (65, 68) is comprised of a syringe having a cylindrical chamber in which a piston slides, and a control rod threaded and screwed into a nut at an end of the chamber.

26. (New) A device according to claim 15, wherein the at least two cutting blades having a triangular shape with a first blade side (20, 48) secured to the sliding tube (13, 39) along one of its generatrices, a second blade side (23, 49) having a cutting thread forming an angle with the first blade side (20), and a top edge substantially coincident with the first sliding tube end (18) to the order of five to ten degrees.

27. (New) A device according to claim 15, wherein the at least two cutting blades comprise four to six cutting blades.

28. (New) A device according to claim 15, wherein a connection between the cutting blades (19) and the sliding tube (13) comprises a laser weld.

29. (New) A device according to claim 15, wherein each of the at least two cutting blades has a first blade side (20, 48), a base, and blade holes (47) along the first blade side (48), the base of the cutting blades being encased in a truncated revolution cone (52), made of plastic material, such that the sliding tube is encased and the cutting blades (46) are locked with respect

to the sliding tube (39) by the plastic material passing through the blade holes (47).

30. (New) A device according to claim 16, wherein the needle sleeve (7) comprises a removable part whose removal permits inserting the closing mandrin further into the needle sleeve and thereby forming an arrester elbow.

31. (New) A device according to claim 16, wherein the closing mandrin comprises a form memory metal, and the closing mandrin has an end that protrudes from the first distal end of the aspiration needle to form an arrester elbow.

31. (New) A device according to claim 15, wherein the an outer surface of the cuff (25, 41) is coated with a substance which becomes sticky at water contact in order to lubricate the guide tube (1,36) for sliding along said cuff.

32. (New) A device for positioning a guiding tube (1) for a nephroscope on a patient, comprising:

an aspiration needle (2) having a first distal end and a second distal end, and a closing mandrin (3) removably fitted within an interior of the needle and extending from the first distal end to the second distal end, the second distal end fitted with a needle sleeve (7) surrounding an exterior surface of the second distal end and having a diameter appreciably inferior to a diameter of the guiding tube (1), the closing mandrin having means for securing the closing mandrin to the needle sleeve (7), the closing mandrin comprising a form memory metal, and having an end that protrudes from the first distal end of the aspiration needle to form an arrester elbow; and

an inflatable enlargement device (4, 36) slidably positioned around the aspiration needle between the first and second distal ends such that the aspiration needle serves as a guide means for the inflatable enlargement device (4, 36), the inflatable enlargement device serving as the guide tube for the nephroscope at the time of its positioning on a patient; the inflatable enlargement device comprising:

a sliding tube (13, 39) positioned around the aspiration needle such that it slides along the aspiration needle and having a first sliding tube end (18) comprising at least two cutting blades (19, 46) making up a trocar and a second sliding tube end (33) comprising a handling sleeve (34, 53);

a support tube (15, 40) shorter in length than the sliding tube, positioned around the sliding tube and attached at its ends to the sliding tube, a first support tube end positioned adjacent to the cutting blades, and

a cuff (25, 41) surrounding the support tube (15, 40) and secured to the support tube at a first cuff end and a second cuff end, the first cuff end positioned immediately adjacent the first support tube end;

the support tube having an inner diameter that is larger than an outer diameter of the sliding tube to form an inflation fluid circulation space where a pressurized inflation fluid can flow between the sliding tube and the support tube,

the inflation fluid circulation space communicating with an inside area of the cuff through a first orifice (29, 42) opened in the support tube inside the cuff (25, 41) and with a filling tube (31, 57) through a second orifice opened in the support tube outside the cuff, such that an interior area of the cuff is in fluid communication with a supply of pressurized inflation fluid connected to the filling tube, the supply of pressurized inflation fluid comprising an inflation fluid supply device (65, 68) containing the inflation fluid and connection means for connecting the inflation fluid supply device to the filling tube such that the inflation fluid is permitted to flow from the supply device into the cuff, but prevented from returning to the inflation fluid supply device.

33. (New) A device according to claim 32, wherein the an outer surface of the cuff (25, 41) is coated with a substance which becomes sticky at water contact in order to lubricate the guide tube (1, 36) for sliding along said cuff.